DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-014851
Date Inspected: 18-May-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG and Tower

Summary of Items Observed:
CWI Inspectors: Mr. Xu Tao, Mr. Lin Yang, Mr. Li Ling

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 13

The QA Inspector observed ZPMC welder Ms. Huang Xinlan, stencil 044780 is using submerged arc welding procedure specification WPS-B-T-2221-2 to make OBG groove butt weld BP3032-001-003. This QA Inspector observed ZPMC Quality Control Inspector Mr. Guo Pan is monitoring this welding and this QA Inspector measured a welding current of approximately 700 amps and 30.5 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed a ZPMC welder is using the flux cored welding process to weld a temporary lifting attachment plate to deck panel DP3032-001. This QA Inspector observed the base material appears to have been preheated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 has recently used flux cored welding procedure WPS-B-T-2233-TB-U2-F to make segment weld SEG3006C-001. This QA Inspector observed ZPMC QC Inspector Mr. Xi Ming Yang has recorded a welding current of 206 amps and 25.4 volts. This QA Inspector observed Mr. He Hanbi appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 has recently used flux cored welding procedure WPS-B-T-2233-TB-U2-F to make segment weld SEG3006G-005. This QA Inspector observed ZPMC QC Inspector Mr. Xi Ming Yang has recorded a welding current of 212 amps and 26.3 volts. This QA Inspector observed Ms. Hue Junrong appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Segment Assembly

This QA Inspector observed ZPMC welder Mr. Wang Fu Peng, stencil 205718 is using shielded metal arc process to perform tack welding of a temporary alignment plate adjacent to the bottom plate weld joint between OBG segments 8CE and 9AE. This QA Inspector observed Mr. Wang Fu Peng appears to be certified to make this 4F (overhead position) weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container and a torch was used to preheat the base material prior to welding. Items observed on this date appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Sheng Long, stencil 215065 is using shielded metal arc process to perform tack welding of a temporary alignment plate to the bottom side of the weld joint between OBG segments 8CW and 9AW. This QA Inspector observed Mr. Zhang Sheng Long appears to be certified to make this 4F (overhead position) weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container and a torch was used to preheat the base material prior to welding. This QA Inspector observed ZPMC workers do not appear to have removed all of the paint from the area where they had preheated the base material prior to welding. This QA Inspector showed the workers where this paint had not been removed and the workers used an electric grinder to remove the paint. This QA Inspector also informed ZPMC CWI Mr. Li Ling that ZPMC workers did not appear to have removed all the paint where these tack welds were being made. Mr. Li Ling informed this QA Inspector that he will tell the workers to remove all paint on the surfaces that will be welded. See the photograph below for additional information. Items observed on this date do not appear to fully comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yu Hui Ye, stencil 045143 has recently used flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make welds SEG039D-137 and -128. These welds join cross beam CB8 to OBG segment 7DW near panel point PP57. This QA Inspector observed ZPMC QC has recorded a welding current of 220 amps and 26.0 volts. This QA Inspector observed that Mr. Yu Hui Ye appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ji Hua, stencil 045227 has recently used flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make welds SEG039E-173 and -164. These welds join cross beam CB8 to OBG segment 7DE near panel point PP56. This QA Inspector observed ZPMC QC has recorded a welding

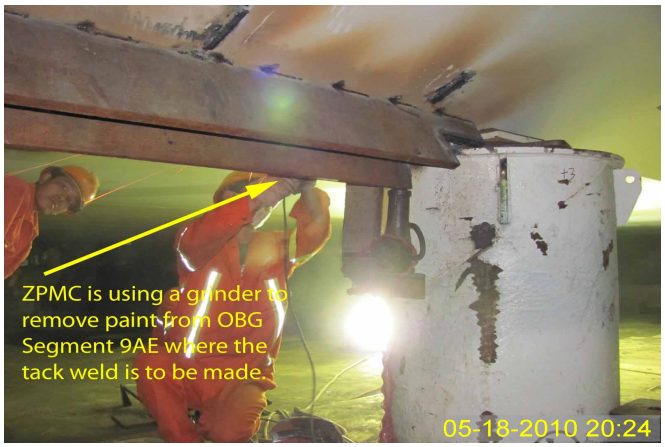
current of 214 amps and 26.0 volts. This QA Inspector observed that Mr. Ji Hua appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Bin, stencil 048696 is using flux cored welding procedure WPS-B-T-2233-B-U2a-F-1 to make OBG segment side plate welds SP225-001-044, -046, 052. This QA Inspector observed that Mr. Wang Bin appears to be certified to make this weld and ZPMC QC Inspectors have recorded a welding current of 218 amps and 26.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Chaili, stencil 045203 is using flux cored welding process to make temporary alignment plate welds on the top deck on the weld joint between OBG segments 8CW and 9AW. This QA Inspector observed the base material was preheated with a torch prior to welding and Ms. Wang Chaili appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

Blast Shop #1

This QA Inspector along with Caltrans QA Inspectors Mr. Mike Hasler and Mr. George Goulet were informed by ZPMC Inspectors that the interior surfaces of North tower lift 1 elevations 18 meters through 38 meters have been grit blasting, prior to application of paint, and the steel surfaces are ready for QA Inspections. ABF and ZPMC Inspectors started to perform visual inspection of the areas indicated above and this QA Inspector visually observed several ZPMC workers were using shovels to remove grit from the bottom of the tower near elevation 20 through 23 meters. Many of the horizontal plate surfaces also have a heavy layer of blasting “dust” that obscures these surfaces. At around 0500 hours ZPMC QC indicated that North tower lift 1 internal surfaces were not ready for final visual inspections. See the photograph below for additional information.



Summary of Conversations:
See Above.
Comments

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer